Policy: Systems Policy SM-04

SUBJECT: Technical Architecture Review Board (TARB)

I. Purpose:

To define the policy and process for reviewing and approving technical architecture designs within the IT organization. This policy is intended to pull together the ongoing efforts to reach a standard systems development process and architecture within the IT organization.

II. Background:

The IT organization was established from six individual IT units that were previously distinct and separate organizations. This has resulted in a myriad of development standards and policies, and developmental tools and architectures. In addition, the industry is rapidly migrating to new technologies and architectures (i.e., imaging, tele-services, client/server, enterprise Local Area Networks (ELAN), distributed processing, etc.).

The mission of the IT organization is to provide the company with cost effective, high quality, and standard system development support services across the entire organization. The establishment of the Technical Architecture Review Board is in keeping with our concept of a single design activity with common policies, standards, and practices in use by all developers.

III. Policy:

This policy establishes the Technical Architecture Review Board (TARB) as the responsible group for technically reviewing **all** IT organization proposed architecture designs, to include the targeted platform, commercial software products, etc. The TARB will ensure that, to the extent possible, all designs support the company's strategic goals, IT strategic direction, and planned technical architecture and significantly limit unique solutions that do not support the planned strategy.

Technical architecture designs must be approved if
(1) the requirement is for a new Automated Information System (AIS),
(2) the requirement causes an expansion or change of operational environment to an existing AIS, or
(3) the technical architecture is targeting a mid-tier platform.

The operational environment includes all hardware and software required to support the application. A review of a system's technical architecture (entire or partial) may also be requested at the discretion of the CIO to confirm the recommend technical solution supports the organizations Corporate Computing Strategy.

These technical architecture designs will be reviewed and approved by the TARB, prior to submission of the design to the Program Manager and/or functional representatives and prior to the beginning of any development work.

If you are targeting a Mid-Tier platform, approval must also be granted by the Principal Deputy Director. The TARB will submit the necessary documentation for approval after having reviewed the proposal.

If Headquarters requests a technical review the TARB will facilitate that review, if requested.

IV. Process:

The Directors, Technical Infrastructure (DTI), Software Engineering (DSE) will:

A. Submit designs in the standard format, as shown in attachment 1, to the TARB. The package will be submitted to the Headquarters, Systems Management Directorate, Policy and Standards. It will be annotated "ATTN: Technical Architecture Review Board."

B. Provide a point of contact (full name, phone number, and EMail address) who will be available to answer any questions or concerns the TARB may have to address.

The members of the TARB will:

1. Review designs in an expedient manner. The average review should take no longer than 10 working days. Designs, which require more than 10 working days to review, will be coordinated with the submitting FSA/DSE.

2. Provide a written approval or recommend alternatives to the FSA/DSE which will enable the proposed design to meet the IT Corporate Computing Strategy.

V. Organizational Structure:

The TARB will operate under the direction of the Director, Systems Management Directorate, FSO Headquarters. The board membership will consist of:

VI. Point of Contact:

Systems Management Directorate, Policy and Standards.

/s/

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Attachment 1 - Standard Format, Request for Approval of Technical Architecture Design

I. Purpose

This section should state what is being requested.

II. Discussion

This section should summarize the nature of the problem and the application. If there is an existing application, state the size, scope, and where it currently resides. The status of the system as legacy, migratory, or interim migratory needs to be identified. Legacy systems should include an estimate for the expected remaining useful life. If a mid-tier is anticipated, the objectives for moving to a mid-tier platform should be elaborated. Areas where there are expectations that costs can be reduced or productivity enhanced should be identified (submit cost/benefit analysis if already completed and available). Because a mid-tier environment invites a client-server approach to application development, those functions of the application where the use of client-server technology appears feasible should be identified.

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Attachment 1, Appendix A - Current System Environment

1. Identify the components of the existing environment.
   - application language (to include version and vendor)
   - operating system (to include version and vendor)
   - interfaces
   - COTS software
   - disk space required for the existing application
   - required Random Access Memory (RAM)
   - number of users
   - number of concurrent users

2. Identify the components of the existing user workstation/terminal environment.
   - terminal type
   - operating system
   - COTS software required to support the application
   - disk space required for the existing application
   - required RAM

3. Identify the telecommunications environment.
   - Network Interface requirement (Internet, asynchronous)
   - other system interfaces/connections

4. Identify any specialized output.

5. Identify maintenance tools currently being used.

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Attachment 1, Appendix B - Proposed System Environment

1. Has the DFAS CCB reviewed this proposal? If so, attach the CCB approval documentation.

2. Identify the components of the proposed environment.
   - hardware
   - application language
   - operating system
   - interfaces
   - COTS software
   - disk space required for the application
   - required Random Access Memory
   - number of anticipated users
   - number of anticipated concurrent users

3. Identify the platform that is being targeted.
   - if mainframe, describe your coordination with Data Center if any
   - if mid-tier, describe your coordination with the Data Center

4. Identify the telecommunications environment.
   - Network Interface requirement (Internet, Asynchronous, etc.)
   - other system interfaces/connections
   - Will FTP be used to download? If so, identify the size of the files and number of projected concurrent users.
   - Identify how transactions will be passed. Attach a copy of your telecommunications plan.

5. Identify how the end user will access this proposed system.

6. TRB may proactively justify design decisions, which they know are contrary to corporate strategy (i.e., change made to a portion of existing system and constraints of the existing design dictate decisions for cost or processing efficiency). This is an optional item only.

7. Has a data administrator been appointed? If so, who is it?

8. Are standard data elements being used? If so, please state.

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Attachment 1, Appendix 3 - Client Requirements

1. Identify workstation requirements.
   - RAM
   - Disk space
   - CPU minimum (see RAM above)
   - Operating System and required revision/version
   - Interface hardware/software (X-Window, TCP/IP software. NIC card)

2. Identify any client commercial off-the-shelf (COTS) software component required.
   - separate licenses per client
   - third-party support software

3. Identify the required security level (C2, B2).

4. Identify Network Interface requirements (Internet, Asynchronous).

5. Identify required user training.

6. Identify specific hardware or software required to support the client environment.
   - input/output devices (mouse, lightpen, special printers/plotters)

7. Identify output requirements (printers, microfiche, tape).

8. Identify the approximate size of records per database.

9. Identify the size of the keys used for each database.

10. Identify the projected number of transactions per second.

11. Will FTP be used to download? If so, identify the size of the files and number of projected concurrent users.

12. Identify how transactions will be passed. Attach a copy of your telecommunications plan.

13. Identify other systems the proposed system must connect to or interface with. What are the interfaces and how will they impact on each piece of the overall system.

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Attachment 1, Appendix D - Proposed Functional Requirements

I. Purpose

This section should state what is being requested.

II. Discussion

The information required herein is identical to the information required for the Technical Architecture Guidance (TAG). If a TAG Review has been conducted, this information should be updated and resubmitted.

1. Batch processing requirement:
   - Identify number, frequency, and purpose
   - Estimated number of transactions/records to be processed

2. Stored data requirement:
   - Estimated database capacity

3. Interface requirements

   For each interfacing file identify:
   - type (input or output)
   - frequency of use or creation
   - estimated number of records
   - sending or receiving system platform
   - transfer mode (telecom, mail, etc.)

   For each referenced data store identify:
   - frequency of access
   - volume of accesses per frequency period
   - estimated number of logical records subject to access
   - hardware platform for referenced data
   - DBMS supporting referenced data
   - security of referenced data

4. Interactive data entry requirements
   - Estimate frequency of entry, and number of entry users

5. Interactive query requirements
   - Estimate frequency of accessing and number of concurrent users

6. Security
   - Security level of stored data

7. What current hardware, software, and communication set-ups (or capabilities) are available to users?

8. Will users require ad hoc query capability?

9. Is there a preferred Application Execution Environment (AEE)?

10. Is there a preferred Software Engineering Environment (SEE)?
    - Identify what development tools are recommended/desired.

11. Is there a desire for Graphical User Interface (GUI)?

12. Are there requirements for interfacing with E-mail?

13. Identify any non-DFAS customers.

14. Identify the organization, location, and number of the principal end users.